

REMARKS

Claims 1-34 remain pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejection(s) in view of the amendments and remarks contained herein.

The amendments to claims 1, 16, 18, 24, and 33 are supported by the disclosure in paragraph 14 of the specification.

Rejection for Obviousness-Type Double Patenting

Claims 1-17 and 24-35 have been rejected under the judicial doctrine of obviousness-type double patenting over claims 1-23 of Colyer et al. U.S. Patent No. 6,518,338 B2. Applicants submit herewith a terminal disclaimer for any patent issuing from the present application with regard to the Colyer patent. Applicants believe the terminal disclaimer overcomes this rejection. Reconsideration and allowance of the claims is respectfully requested in light of the terminal disclaimer.

Statement of Obligation to Assign

The invention of the present application and the invention of Colyer et al., U.S. Patent No. 6,518,338 B2 were, at the time the later invention was made, both owned by or subject to an obligation of assignment to BASF Corporation.

Rejection for Under 35 U.S.C. § 102(b) over Jouck et al.

Claims 1, 4-13, 15-18, and 20-35 have been rejected under section 102(b) as anticipated by the Jouck patent, U.S. 5,322,715. Applicants respectfully traverse the rejection and request reconsideration of the claims.

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The Jouck patent emulsion polymer, as pointed out in the Office Action, has Mn higher than 200,000. The Jouck patent, therefore, does not anticipate any of claims 1, 4-13, 15-18, or 20-35, all of which recite an acrylic polymer having a number average up to about 30,000. Jouck, column 6, line 62.

Claim 4 is not anticipated by the Jouck patent for the further reason that the Jouck patent does not disclose dispersing pigment in an hydroxyl-functional acrylic polymer.

Claim 13 is not anticipated by the Jouck patent for the further reason that the Jouck patent does not disclose an acrylic polymer further polymerized with 1-20 wt% of a combination of styrene, n-butyl methacrylate, and n-butyl acrylate and 0.25-20 wt.% of an acrylic or methacrylic ester having amine functionality.

Claim 17 is not anticipated by the Jouck patent for the further reason that the Jouck patent does not disclose an acrylic polymer for which a 30% solution in a one-to-one by weight combination of n-butyl acetate and methyl isobutyl ketone has a viscosity of less than or equal to about 0.3 Stokes at 25°C.

Claim 18 is not anticipated by the Jouck patent for the further reason that the Jouck patent does not disclose an intermix system having the components (a) and (b) as claimed, wherein the color components (a) are so related to produce refinish basecoats of any desired color.

Claim 20 is not anticipated by the Jouck patent for the further reason that the Jouck patent does not disclose an intermix system that further comprises a component containing a crosslinker reactive with the hydroxyl-functional acrylic polymer.

Claim 21 is not anticipated by the Jouck patent for the further reason that the Jouck patent does not disclose an intermix system in which the color components include the hydroxyl functional acrylic polymer.

Claim 22 is not anticipated by the Jouck patent for the further reason that the Jouck patent does not disclose an intermix system in which one color component comprises carbon black pigment dispersed by the hydroxyl functional acrylic polymer.

Claim 23 is not anticipated by the Jouck patent for the further reason that the Jouck patent does not disclose an intermix system in which one color component comprises carbon black pigment dispersed by an hydroxyl functional acrylic polymer having amine functionality.

Claims 26 and 27 are not anticipated by the Jouck patent for the further reason that the Jouck patent does not disclose a method in which a clearcoat composition comprises at least on material reactive with the acrylic polymer of the layer of basecoat composition.

Claims 28 and 30-32 not anticipated by the Jouck patent for the further reason that the Jouck patent does not disclose a basecoat composition that has the claimed dry to handle times after application.

Claim 35 is not anticipated by the Jouck patent for the further reason that the Jouck patent does not disclose a refinish basecoat composition further including a UV-curable component.

None of the rejected claims are anticipated by the Jouck patent. Accordingly, Applicants respectfully request withdrawal of this rejection and reconsideration and allowance of the claims.

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Rejection for Under 35 U.S.C. § 103(a) over Jouck et al.

Claims 1, 4-13, 15-18, and 20-35 have been rejected under section 103(a) as obvious over the Jouck patent, U.S. 5,322,715. Applicants respectfully traverse the rejection and request reconsideration of the claims.

The Jouck patent teaches using an emulsion polymer having Mn of 200,000 to 2,000,000, preferably 300,000 to 1,500,000. Jouck, column 6, line 62. The Jouck patent, therefore, does not suggest any of claims 1, 4-13, 15-18, or 20-35, all of which recite an acrylic polymer having a number average up to about 30,000.

Claim 4 is patentable over the Jouck patent for the further reason that the Jouck patent does not mention or suggest dispersing pigment in the hydroxyl-functional acrylic polymer. The method of dispersing pigment mentioned in Column 17, Example C "Preparation of basecoat coating compositions" is slurring aluminum bronze in butyl glycol. The slurry is added directly to the rest of the coating. Column 12, lines 18-22 discloses that separate, water-thinnable resins such as aminoplast resins, polyesters, or polyethers are used to disperse the Jouck pigments.

Claim 13 is patentable over the Jouck patent for the further reason that the Jouck patent does not mention or suggest an acrylic polymer further polymerized with 1-20 wt% of a combination of styrene, n-butyl methacrylate, and n-butyl acrylate and 0.25-20 wt.% of an acrylic or methacrylic ester having amine functionality. The Jouck patent instead teaches having acid functionality (monomers (b3)). Column 6, lines 10-12 and 46-52. The Jouck patent does not mention a specific combination of styrene, n-butyl methacrylate, and n-butyl acrylate.

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Claim 17 is patentable over the Jouck patent for the further reason that the Jouck patent does not mention or suggest an acrylic polymer for which a 30% solution in a one-to-one by weight combination of n-butyl acetate and methyl isobutyl ketone has a viscosity of less than or equal to about 0.3 Stokes at 25°C. The extremely high molecular weights of the Jouck patent acrylics suggests very high solution viscosities, if indeed they are soluble in these solvents at all.

Claim 18 is patentable over the Jouck patent for the further reason that the Jouck patent does not mention or suggest an intermix system having the components (a) and (b) as claimed, wherein the color components (a) are so related to produce refinish basecoats of any desired color. The Jouck patent describes only coating compositions; intermix systems are neither mentioned nor suggested.

Claim 20 is patentable over the Jouck patent for the further reason that the Jouck patent does not mention or suggest an intermix system that further comprises a component containing a crosslinker reactive with the hydroxyl-functional acrylic polymer. Not only does the Jouck patent not mention or suggest intermix systems, it does not suggest any arrangement in which one component contains the acrylic polymer and a separate component contains a crosslinker reactive with the acrylic polymer.

Claim 21 is patentable over the Jouck patent for the further reason that the Jouck patent does not mention or suggest an intermix system in which the color components include the hydroxyl functional acrylic polymer. The Jouck system does not describe dispersing the pigments in its acrylic polymer, but rather uses other resins or solvent slurry methods, as discussed above.

Claim 22 is patentable over the Jouck patent for the further reason that the Jouck patent does not mention or suggest an intermix system in which one color component comprises carbon black pigment dispersed by the hydroxyl functional acrylic polymer. As already discussed, the Jouck system does not describe dispersing the pigments in its acrylic polymer, but rather uses other resins or solvent slurry methods. The present invention provides an unexpected improvement in color development of carbon black pigment dispersed in the present acrylic polymer. Neither the dispersion generally nor the improved color development of carbon black pigment is contemplated or suggested by the Jouck patent.

Claim 23 is patentable over the Jouck patent for the further reason that the Jouck patent does not mention or suggest an intermix system in which one color component comprises carbon black pigment dispersed by an hydroxyl functional acrylic polymer having amine functionality. In addition to the shortcomings of the reference described with respect to claim 22, the Jouck patent also does not mention or suggest incorporating amine functionality into the acrylic polymer.

Claims 26 and 27 are patentable over the Jouck patent for the further reason that the Jouck patent does not mention or suggest a method in which a clearcoat composition comprises at least on material reactive with the acrylic polymer of the layer of basecoat composition. The Jouck patent makes no mention whatever of such a possibility.

Claims 28 and 30-32 are patentable over the Jouck patent for the further reason that the Jouck patent does not mention or suggest a basecoat composition that has the claimed dry to handle times after application. The only mention of drying in the Jouck

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patent is of a flash-off period before clearcoat is applied over the basecoat layer. Dry to handle times refer to the time before the coating is tack-free. It is important, e.g., when the article being refinished must be taped for custom lines. See paragraph 54 of the present application. The Jouck patent simply doesn't mention this important property for refinish coatings.

Claim 35 is patentable over the Jouck patent for the further reason that the Jouck patent does not mention or suggest a refinish basecoat composition further including a UV-curable component.

All of the rejected claims are patentable over the Jouck patent. Accordingly, Applicants respectfully request withdrawal of this rejection and reconsideration and allowance of the claims.

Rejection for Under 35 U.S.C. § 102(b) over Benefiel et al.

Claims 1-35 have been rejected under section 102(b) as anticipated by the Benefiel patent, U.S. 3,639,147. Applicants respectfully traverse the rejection and request reconsideration of the claims.

Claims 1-35 are not anticipated by the Benefiel patent because the Benefiel patent does not teach or mention refinish compositions, intermix systems from which refinish compositions can be prepared, or methods of refinishing a substrate. Unlike the original finish coating compositions, which are typically cured at temperatures of 110°C or higher, automotive refinish coatings must be either thermoplastic compositions or else thermosetting compositions able to cure at ambient or low temperature. Paragraph 0003 of the present application. Refinish coating compositions are recognized in the art as distinct from OEM coating compositions. "Coatings," Encyclopedia of Polymer

Science and Engineering Supplemental Volume, pages 118-119 (heading "Automotive Refinish Paints"), H.F. Mark, ed. 1989 (submitted with reply mailed October 31, 2002). The Benefiel coatings are not refinish coatings. The Benefiel compositions must be baked at high temperatures, 180° to 400°F. Column 7, lines 42-45. The bake schedules in the examples are 30 minutes at 250°F and 30 minutes at 280°F, 30 minutes at 325°F, and 20 minutes at 340°F. Such temperatures are much too high for refinishing a vehicle, as parts on a fully-assembled vehicle would be deformed in such a bake. Coating compositions that require high bake temperatures like the Benefiel coating compositions cannot be used for refinish. The Benefiel is different in nature because it must be cured at a temperature that is too high for refinishing.

Claims 1-35 are not anticipated by the Benefiel patent because the Benefiel patent does not teach or mention refinish compositions, intermix systems from which refinish compositions can be prepared, or methods of refinishing a substrate that use an acrylic polymer has a number average molecular weight of at least about 6000 and up to about 30,000. The Benefiel patent makes no mention whatever of polymer number average molecular weights. Polymer molecular weights can vary widely.. The Examiner has provided no reasoned basis for concluding that any acrylic polymer disclosed in the Benefiel patent inherently has Applicants' claimed number average molecular weight.

Claims 1-35 are not anticipated by the Benefiel patent because the Benefiel patent does not teach or mention refinish compositions, intermix systems from which refinish compositions can be prepared, or methods of refinishing a substrate that use an acrylic polymer is polymerized using at least about 45% by weight of a cycloaliphatic

monomer, based on the total weight of monomers polymerized. The Benefiel patent teaches that one of its coating composition embodiments includes an acrylic prepared with 17 to 94.8 weight percent of at least one "different ethylenically unsaturated monomer of the individual material selected n (1) which is copolymerizable with the unsaturated acid of (1)." There are, if not an infinite variety, at least thousands and thousands of monomer combinations and amounts that could be used. The Benefiel patent mentions dozens of monomers and provides no specific amounts for any of them. The Benefiel patent does not disclose that its acrylic polymer has at least about 45% by weight cycloaliphatic monomer. Neither is such a parameter inherent in the Benefiel acrylic, as the acrylic could just as well have 17% methyl methacrylate, 8% of the unsaturated aliphatic acid mentioned at the bottom of column 2, and 75% of the beta hydroxyl alkyl ester of unsaturated aliphatic acid.

Claim 4 is not anticipated by the Benefiel patent for the further reason that the Benefiel patent does not disclose dispersing pigment in an hydroxyl-functional acrylic polymer prepared with at least about 45% by weight cycloaliphatic monomer.

Claim 5 is not anticipated by the Benefiel patent for the further reason that the Benefiel patent does not disclose a refinish basecoat composition free of materials reactive with the acrylic polymer. As the Office Action states, the Benefiel basecoat contains a crosslinking agent.

Claim 6 is not anticipated by the Benefiel patent for the further reason that the Benefiel patent does not disclose a refinish basecoat composition containing a combination of the acrylic resin and a polyester.

Claims 10 and 11 are not anticipated by the Benefiel patent for the further reason that the Benefiel patent does not disclose refinish basecoat compositions comprising the acrylic polymer polymerized with at least about 60% by weight of the cycloaliphatic monomer or up to about 85% by weight of the cycloaliphatic monomer.

Claim 13 is not anticipated by the Benefiel patent for the further reason that the Benefiel patent does not disclose an acrylic polymer further polymerized with 1-20 wt% of a combination of styrene, n-butyl methacrylate, and n-butyl acrylate and 0.25-20 wt.% of an acrylic or methacrylic ester having amine functionality.

Claim 15 is not anticipated by the Benefiel patent for the further reason that the Benefiel patent does not disclose a refinish basecoat composition in which carbon black pigment is dispersed with a hydroxyl functional acrylic polymer polymerized with at least about 45% by weight cycloaliphatic monomer.

Claim 17 is not anticipated by the Benefiel patent for the further reason that the Benefiel patent does not disclose an acrylic polymer for which a 30% solution in a one-to-one by weight combination of n-butyl acetate and methyl isobutyl ketone has a viscosity of less than or equal to about 0.3 Stokes at 25°C.

Claim 18 is not anticipated by the Benefiel patent for the further reason that the Benefiel patent does not disclose an intermix system having the components (a) and (b) as claimed, wherein the color components (a) are so related to produce refinish basecoats of any desired color. The Benefiel patent also does not disclose the intermix system with at least 30 color components of claim 19.

Claim 20 is not anticipated by the Benefiel patent for the further reason that the Benefiel patent does not disclose and intermix system that further comprises a

component containing a crosslinker reactive with the hydroxyl-functional acrylic polymer.

Claim 21 is not anticipated by the Benefiel patent for the further reason that the Benefiel patent does not disclose an intermix system in which the color components include the hydroxyl functional acrylic polymer.

Claim 22 is not anticipated by the Benefiel patent for the further reason that the Benefiel patent does not disclose an intermix system in which one color component comprises carbon black pigment dispersed by the hydroxyl functional acrylic polymer.

Claim 23 is not anticipated by the Benefiel patent for the further reason that the Benefiel patent does not disclose an intermix system in which one color component comprises carbon black pigment dispersed by an hydroxyl functional acrylic polymer having amine functionality.

Claims 26 and 27 are not anticipated by the Benefiel patent for the further reason that the Benefiel patent does not disclose a method in which a clearcoat composition comprises at least one material reactive with the acrylic polymer of the layer of basecoat composition.

Claims 28 and 30-32 not anticipated by the Benefiel patent for the further reason that the Benefiel patent does not disclose a basecoat composition that has the claimed dry to handle times after application.

Claim 35 is not anticipated by the Benefiel patent for the further reason that the Benefiel patent does not disclose a refinish basecoat composition further including a UV-curable component.

None of the rejected claims are anticipated by the Benefiel patent. Accordingly, Applicants respectfully request withdrawal of this rejection and reconsideration and allowance of the claims.

Rejection for Under 35 U.S.C. § 103(a) over Benefiel et al.

Claims 1-35 have been rejected under section 103(a) as obvious over the Benefiel patent, U.S. 3,639,147. Applicants respectfully traverse the rejection and request reconsideration of the claims.

A prima facie case of obviousness must state the differences between the prior art and the claims at issue and resolve the level of ordinary skill in the pertinent art. The claimed invention must be considered as a whole. The reference must suggest the desirability of making the modification. There must be a reasonable expectation of success in the reference for making the modification. The examiner must consider objective evidence of unexpected results. Graham v. John Deere Co.; see also MPEP 2141 and 706.02(j).

The Office Action does not set out a prima facie case of obviousness of any of the claims at issue. The Office Action reads,

"With regard to some properties" — What properties?

"of the base coat polymers" — No rejection for obviousness is thus directed to the specific refinish basecoat composition properties of claims 2-7, 15, 17, and 35, the intermix system properties of claims 18-23, the method steps of claims 24-32.

"since the basecoat compositions of Benefiel are essentially the same" — Applicants respectfully submit that this has not been shown, and, at any rate, does not show that any of the intermix system claims or method claims are obvious.

"and are made by the same process" — The Examiner presented no argument or evidence concerning process steps for making the basecoat compositions.

Claims 1-15 and 35 are patentable over the Benefiel patent because the claimed refinish basecoat composition provides an unexpected improvement in dry-to-handle time, as shown by the comparison in the examples of the application. Example 2 of the invention was dry to handle in 5 minutes, while Comparative Example A needed 13 minutes. Example 3 of the invention was dry to handle twice as fast as Comparative Example B.

Claim 4 is patentable over the Benefiel patent for the further reason that the Benefiel patent does not mention or suggest dispersing pigment in an hydroxyl-functional acrylic polymer prepared with at least about 45% by weight cycloaliphatic monomer.

Claim 5 is patentable over the Benefiel patent for the further reason that the Benefiel patent does not mention or suggest a refinish basecoat composition free of materials reactive with the acrylic polymer. As the Office Action states, the Benefiel

basecoat contains a crosslinking agent. There is not motivation in the Benefiel patent to not have the crosslinking agent with that acrylic polymer.

Claim 6 is patentable over the Benefiel patent for the further reason that the Benefiel patent does not mention or suggest a refinish basecoat composition containing a combination of the acrylic resin and a polyester. The Benefiel patent does not suggest a basecoat composition containing any combination of polymers.

Claims 10 and 11 are patentable over the Benefiel patent for the further reason that the Benefiel patent does not mention or suggest refinish basecoat compositions comprising the acrylic polymer polymerized with at least about 60% by weight of the cycloaliphatic monomer or up to about 85% by weight of the cycloaliphatic monomer.

Claim 13 is patentable over the Benefiel patent for the further reason that the Benefiel patent does not mention or suggest an acrylic polymer further polymerized with 1-20 wt% of a combination of styrene, n-butyl methacrylate, and n-butyl acrylate and 0.25-20 wt.% of an acrylic or methacrylic ester having amine functionality. No acrylic copolymer with this monomer combination is mentioned or suggested.

Claim 15 is patentable over the Benefiel patent for the further reason that the Benefiel patent does not mention or suggest a refinish basecoat composition in which carbon black pigment is dispersed with a hydroxyl functional acrylic polymer polymerized with at least about 45% by weight cycloaliphatic monomer. Further, as illustrated by the comparison of Example 2 of the invention to Comparative Example A, the invention has an unexpected improvement in dispersion of carbon black pigment.

Claim 17 is patentable over the Benefiel patent for the further reason that the Benefiel patent does not mention or suggest an acrylic polymer for which a 30%

solution in a one-to-one by weight combination of n-butyl acetate and methyl isobutyl ketone has a viscosity of less than or equal to about 0.3 Stokes at 25°C.

Claim 18 is patentable over the Benefiel patent for the further reason that the Benefiel patent does not mention or suggest an intermix system having the components (a) and (b) as claimed, wherein the color components (a) are so related to produce refinish basecoats of any desired color. The Benefiel patent also does not disclose the intermix system with at least 30 color components of claim 19. Because the Benefiel patent does not concern refinish coatings, there is no motivation to devise a system to match OEM coating for refinishing.

Claim 20 is patentable over the Benefiel patent for the further reason that the Benefiel patent does not mention or suggest an intermix system that further comprises a component containing a crosslinker reactive with the hydroxyl-functional acrylic polymer.

Claim 21 is patentable over the Benefiel patent for the further reason that the Benefiel patent does not mention or suggest an intermix system in which the color components include the hydroxyl functional acrylic polymer.

Claim 22 is patentable over the Benefiel patent for the further reason that the Benefiel patent does not mention or suggest an intermix system in which one color component comprises carbon black pigment dispersed by the hydroxyl functional acrylic polymer. Further, as illustrated by the comparison of Example 2 of the invention to Comparative Example A, the invention has an unexpected improvement in dispersion of carbon black pigment.

Claim 23 is patentable over the Benefiel patent for the further reason that the Benefiel patent does not mention or suggest an intermix system in which one color component comprises carbon black pigment dispersed by an hydroxyl functional acrylic polymer having amine functionality. Further, as illustrated by the comparison of Example 2 of the invention to Comparative Example A, the invention has an unexpected improvement in dispersion of carbon black pigment.

Claims 26 and 27 are patentable over the Benefiel patent for the further reason that the Benefiel patent does not mention or suggest a method in which a clearcoat composition comprises at least one material reactive with the acrylic polymer of the layer of basecoat composition.

Claims 28 and 30-32 are patentable over the Benefiel patent for the further reason that the Benefiel patent does not mention or suggest a basecoat composition that has the claimed dry to handle times after application. As the examples in the present specification illustrate, dry to handle times can vary greatly.

Claim 35 is patentable over the Benefiel patent for the further reason that the Benefiel patent does not mention or suggest a refinish basecoat composition further including a UV-curable component. UV curing methods or compositions are not mentioned at all.

All of the rejected claims are patentable over the Benefiel patent. Accordingly, Applicants respectfully request withdrawal of this rejection and reconsideration and allowance of the claims.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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July 15, 2003
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